

EXAMPLE OF ROTOR FLUX VECTOR DIRECTION CALCULATION

CASE: AC POWER ϕ_2 60
 ROTOR ANGLE 150
 RESULT: $60 - 150 = -90$

ROTOR FLUX VECTOR MUST POINT AT -90 DEGREES TO REMAIN IN PHASE-LOCK

ALL NUMBERS IN DEGREES

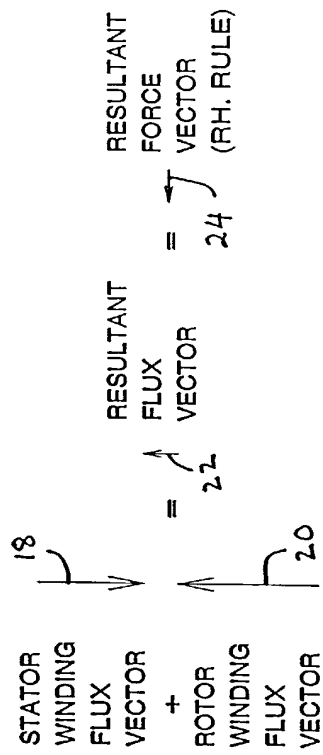
Fig. 1

EXAMPLE OF ROTOR FLUX VECTOR MAGNITUDE CALCULATION

CASE:

STATOR WINDING FLUX VECTOR MAGNITUDE 3 UNITS

ROTOR WINDING FLUX VECTOR MAGNITUDE 4 UNITS



ROTOR WILL ACCELERATE COUNTERCLOCKWISE

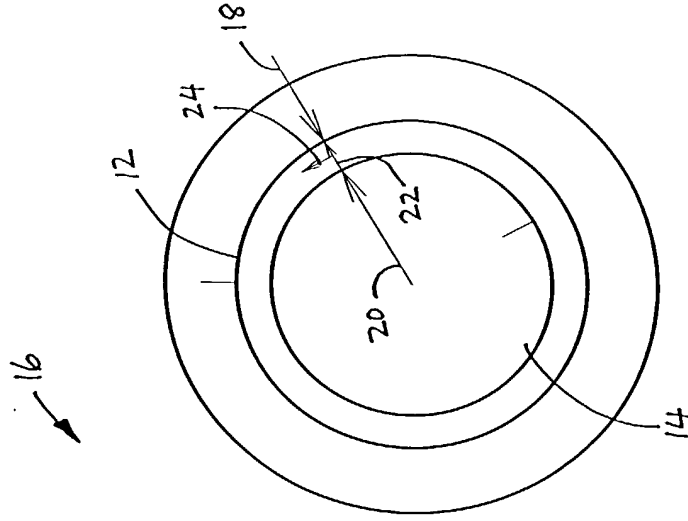
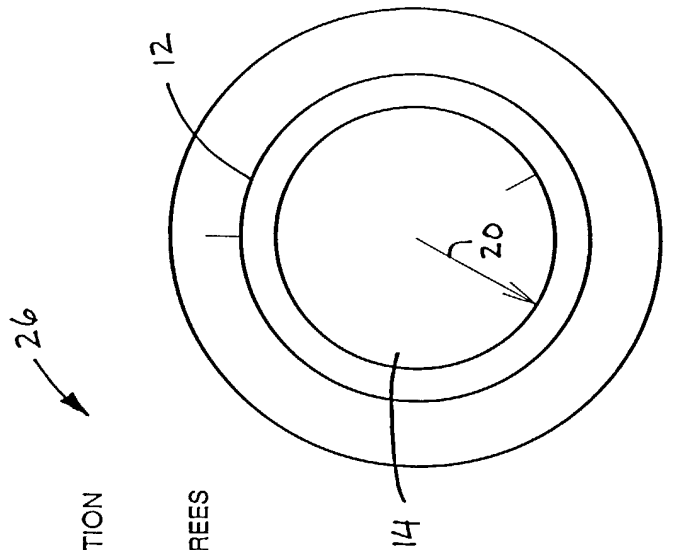
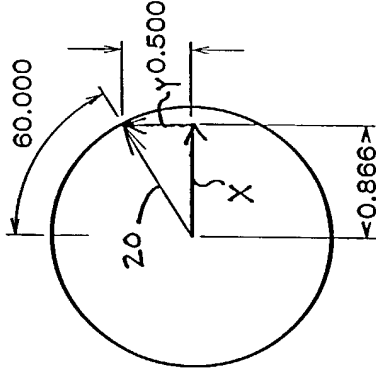


FIG. 2



EXAMPLE OF ROTOR FLUX VECTOR COMPONENT SEPARATION

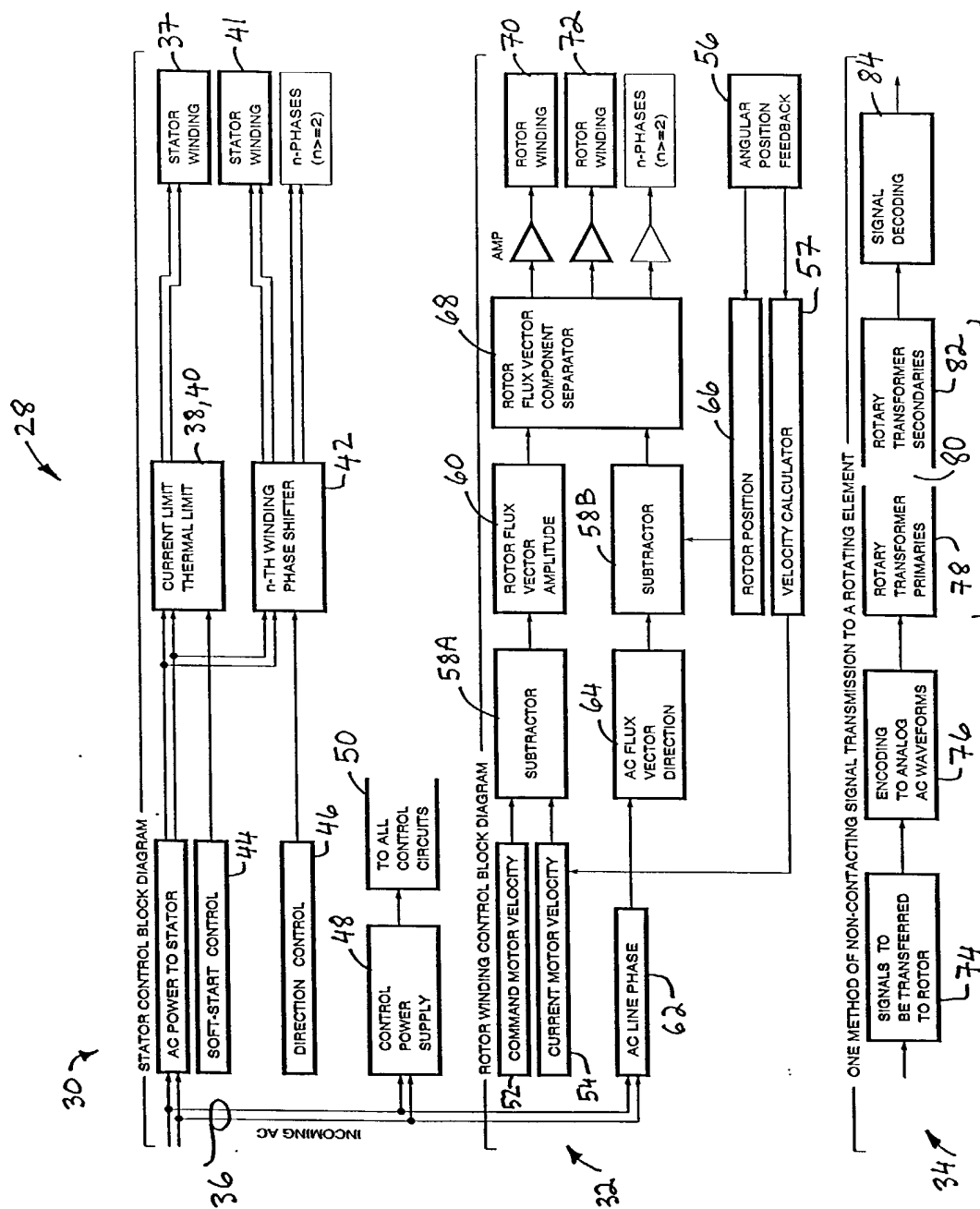
CASE:
 ROTOR WINDING FLUX VECTOR DIRECTION 60 DEGREES
 2-PHASE ROTOR WINDING



COMPONENT X DRIVE CURRENT SCALING FACTOR 0.866
 COMPONENT Y DRIVE CURRENT SCALING FACTOR 0.500

Fig. 3

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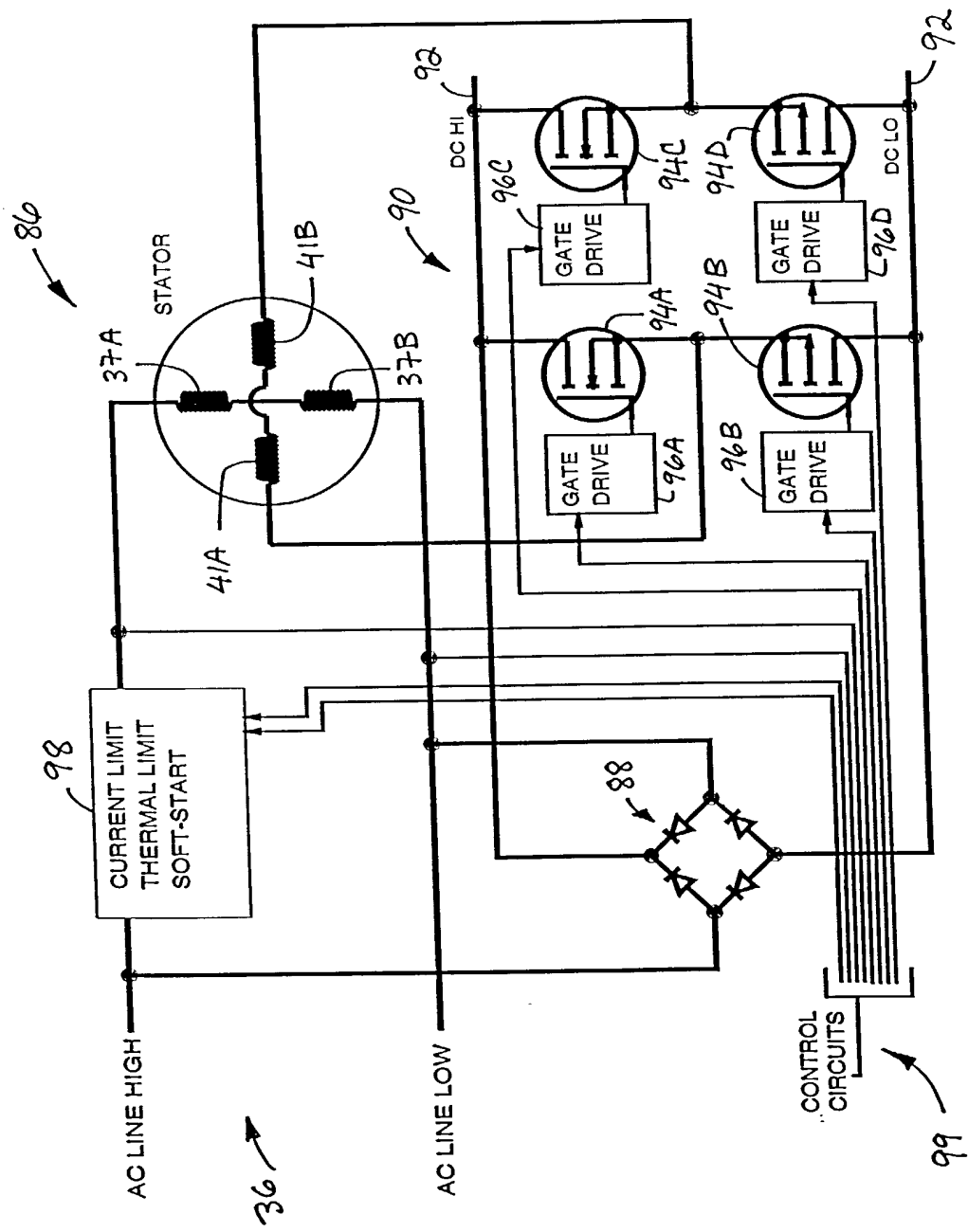


FIG. 5

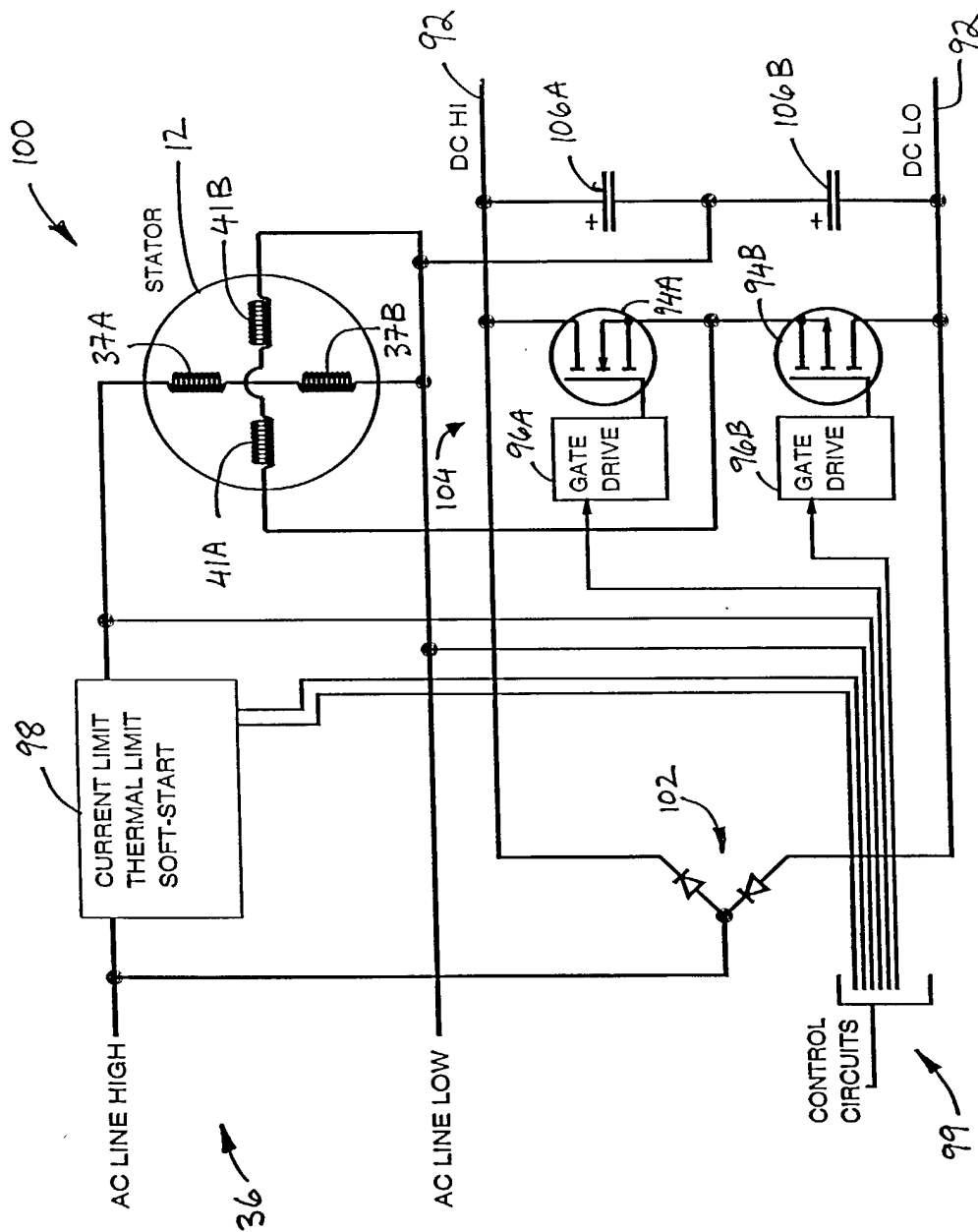


FIG. 6

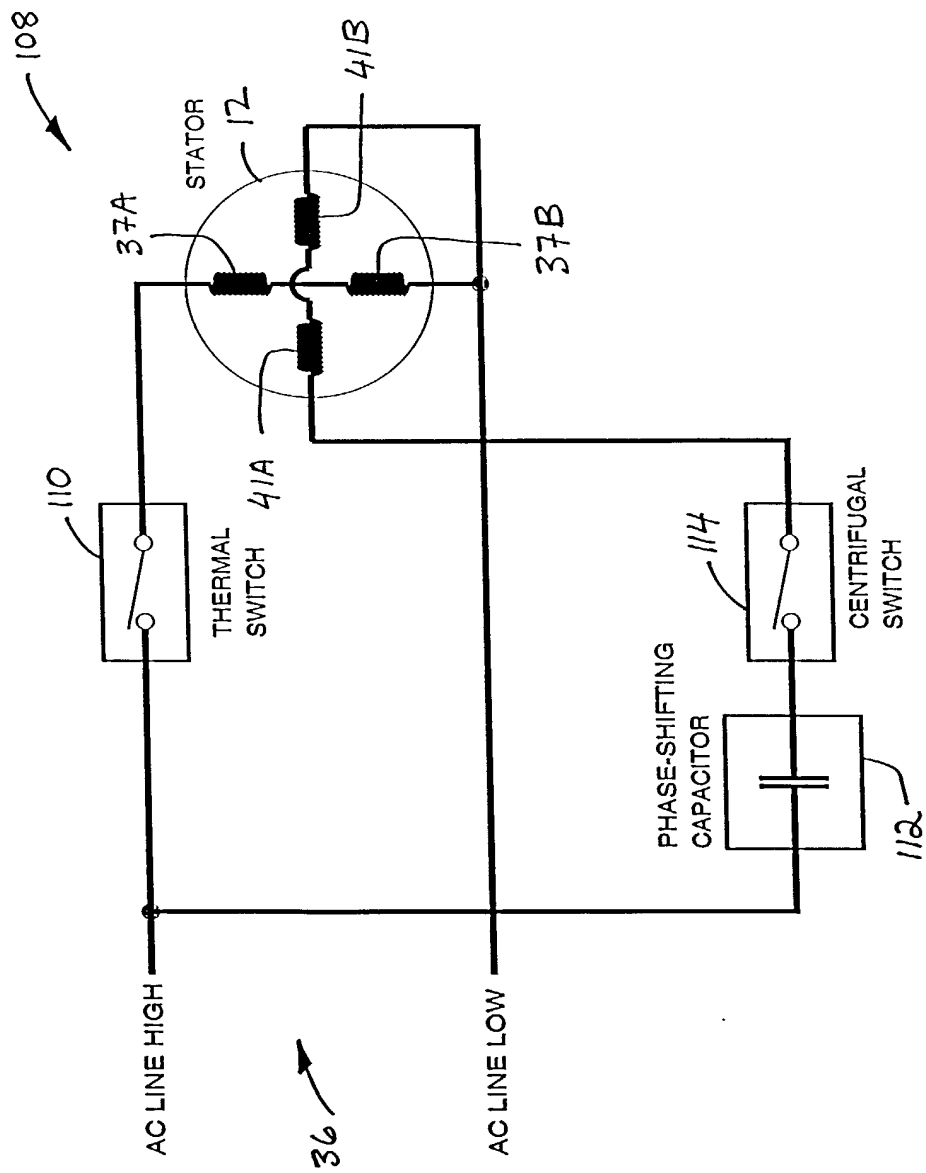
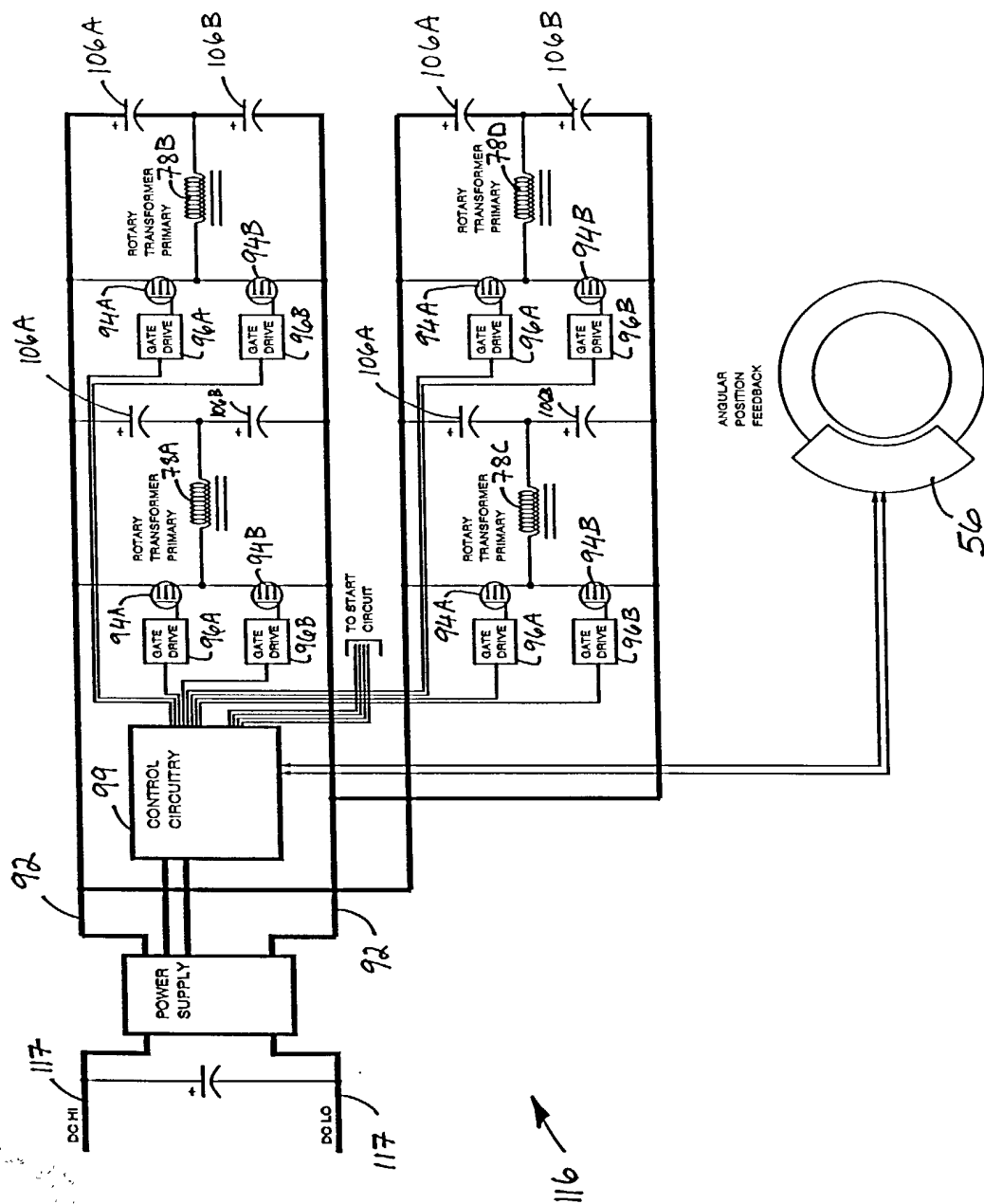


Fig. 7



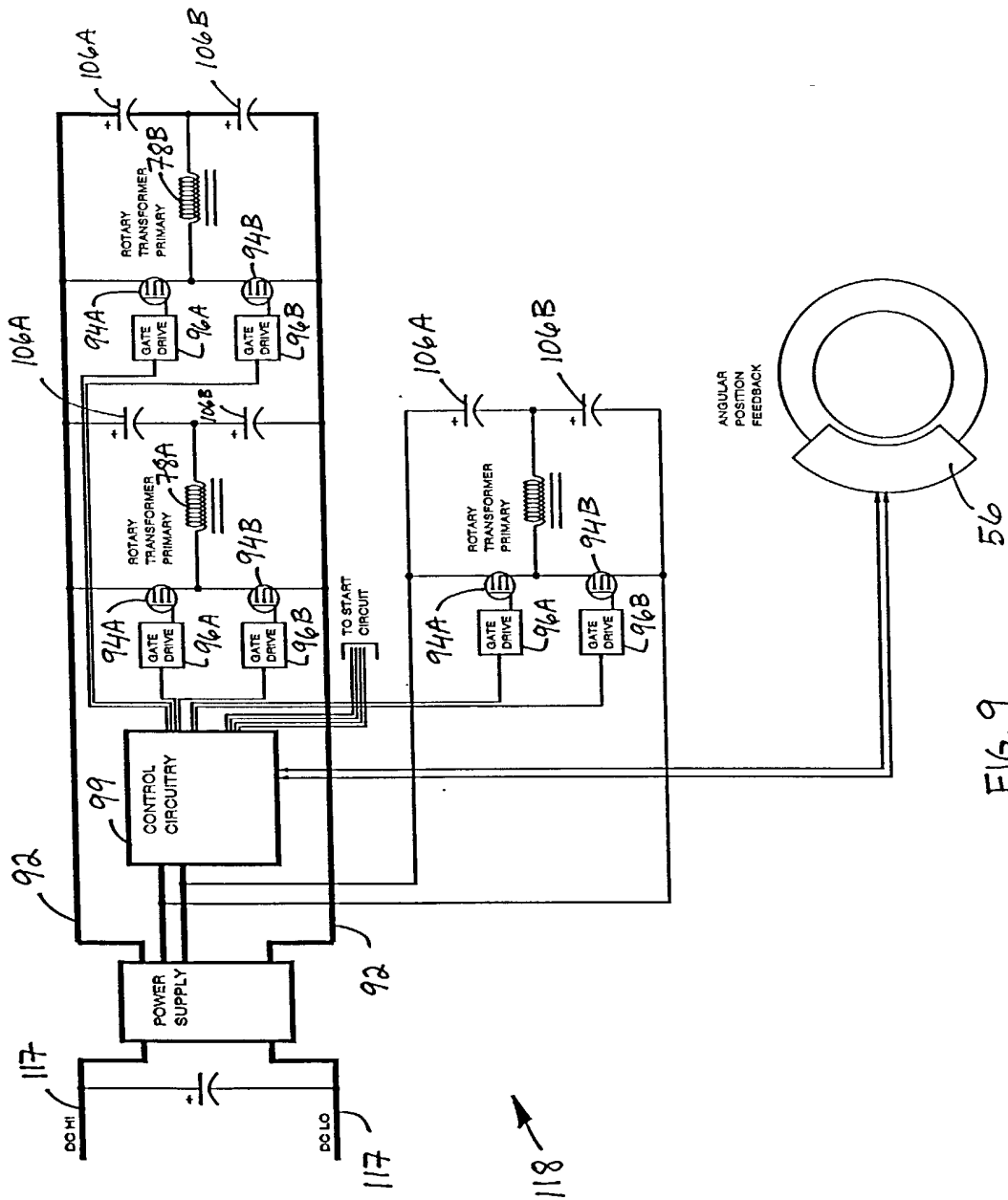


FIG. 9

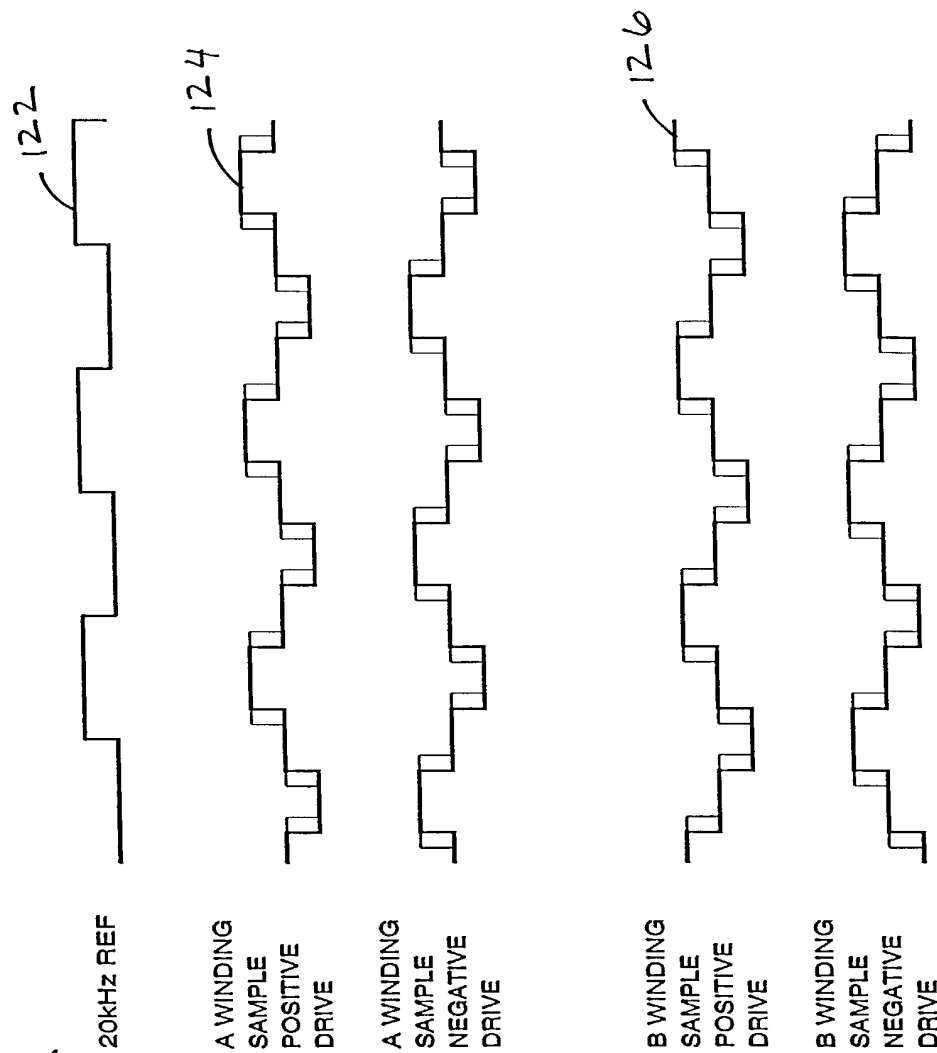


Fig. 10

128

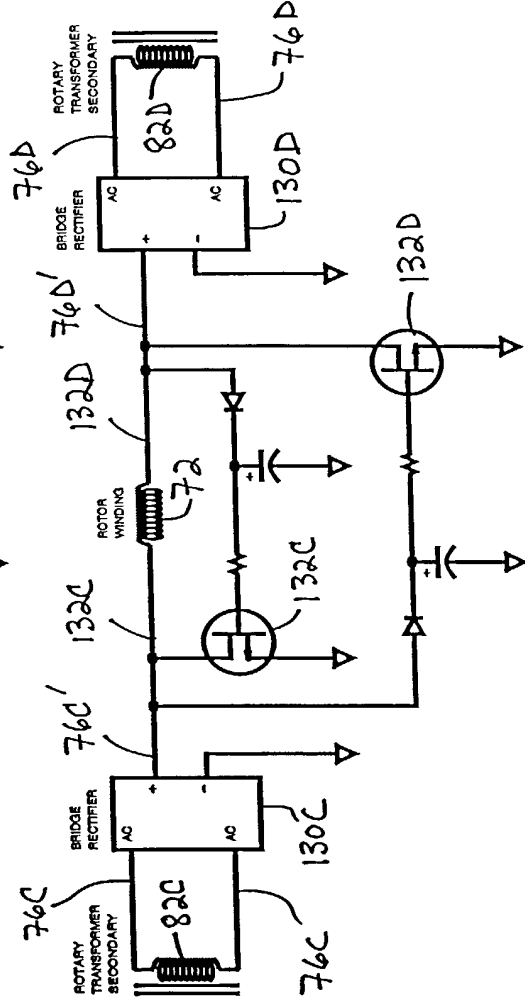
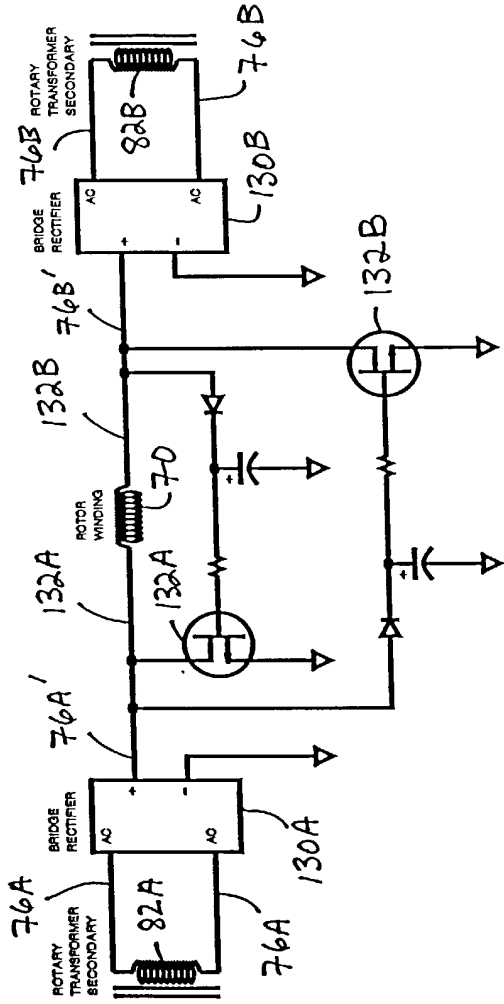


FIG. 11

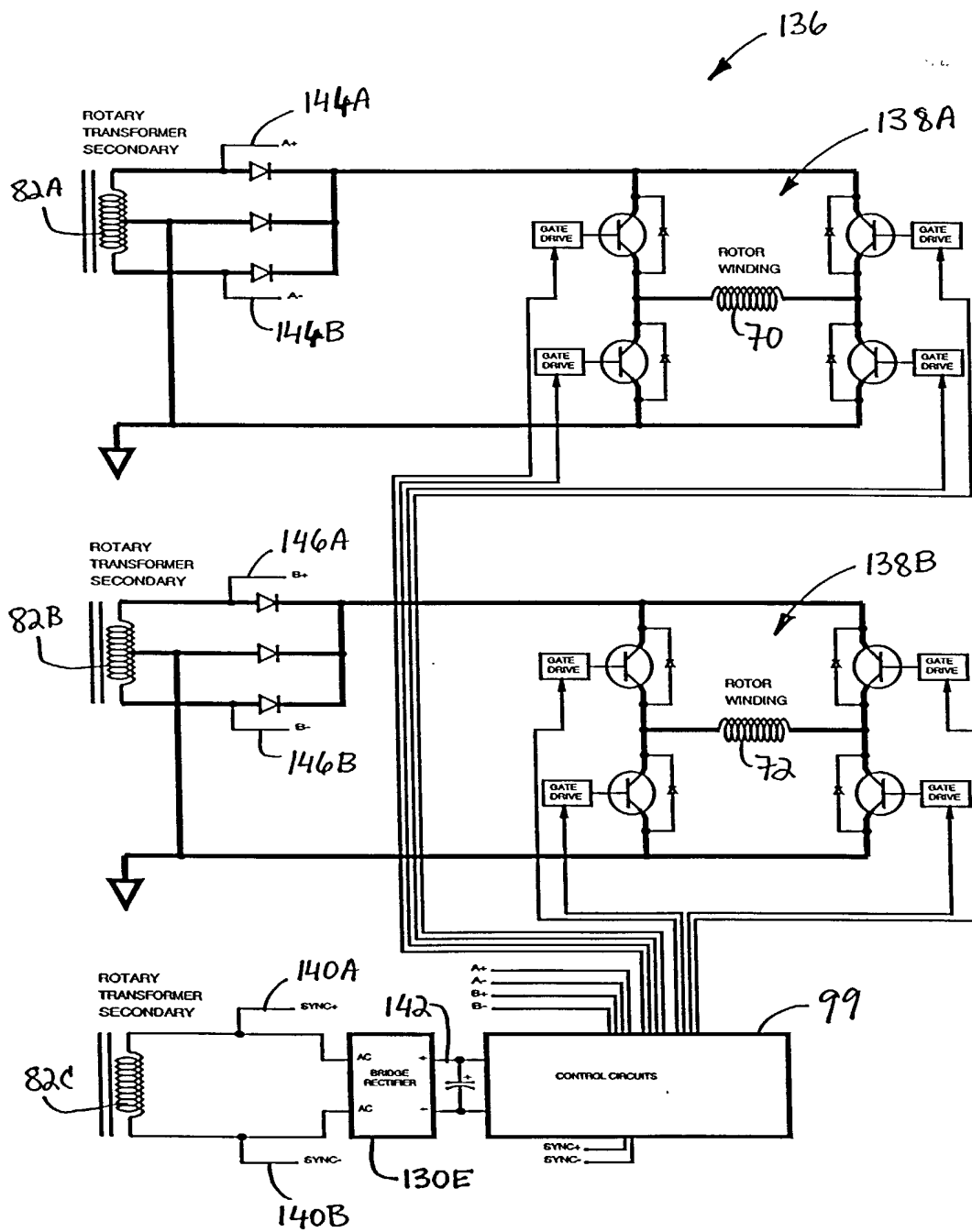


FIG. 12

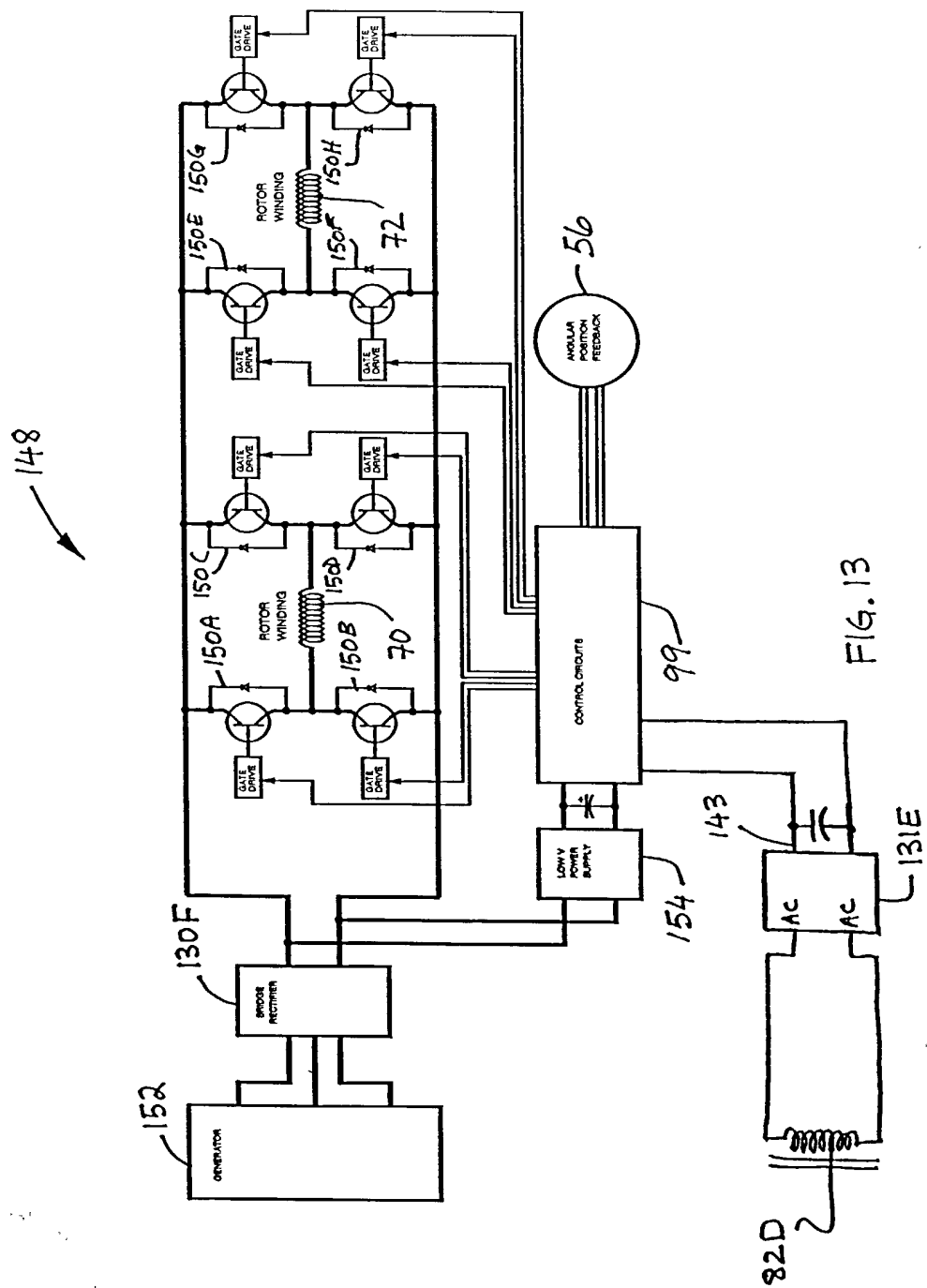
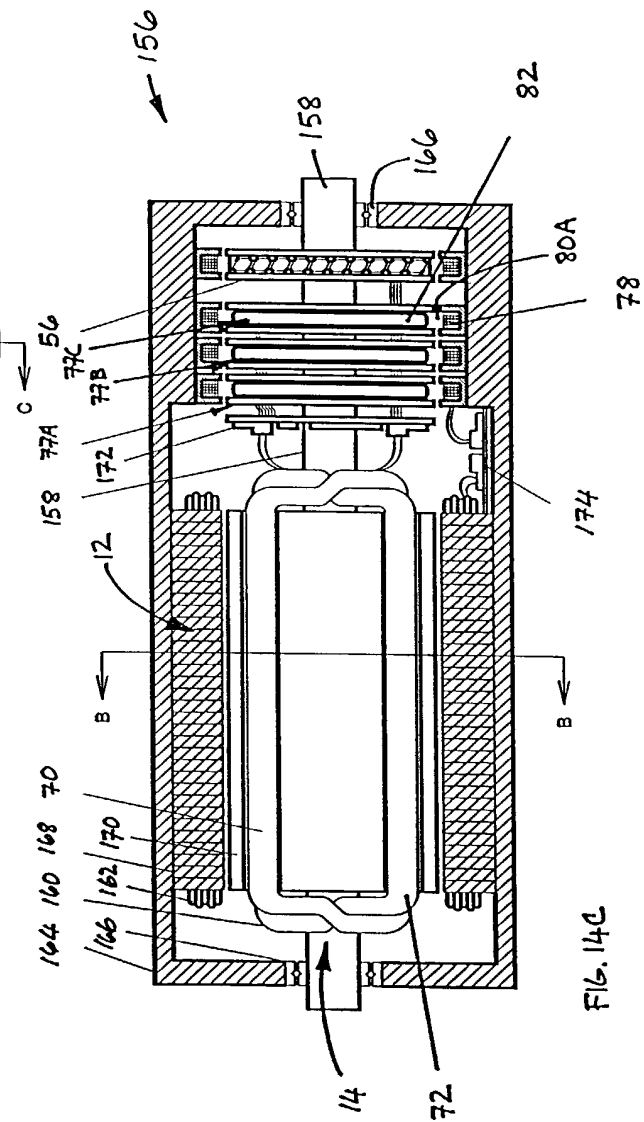
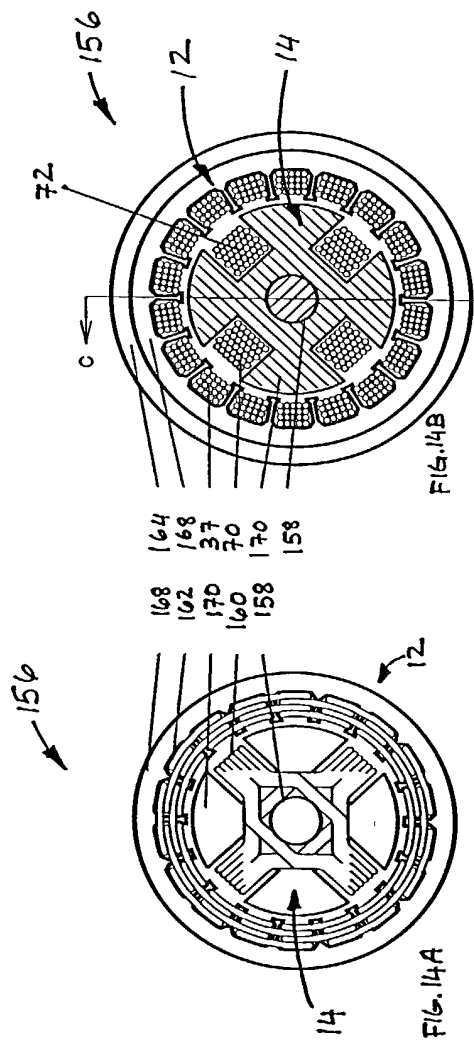
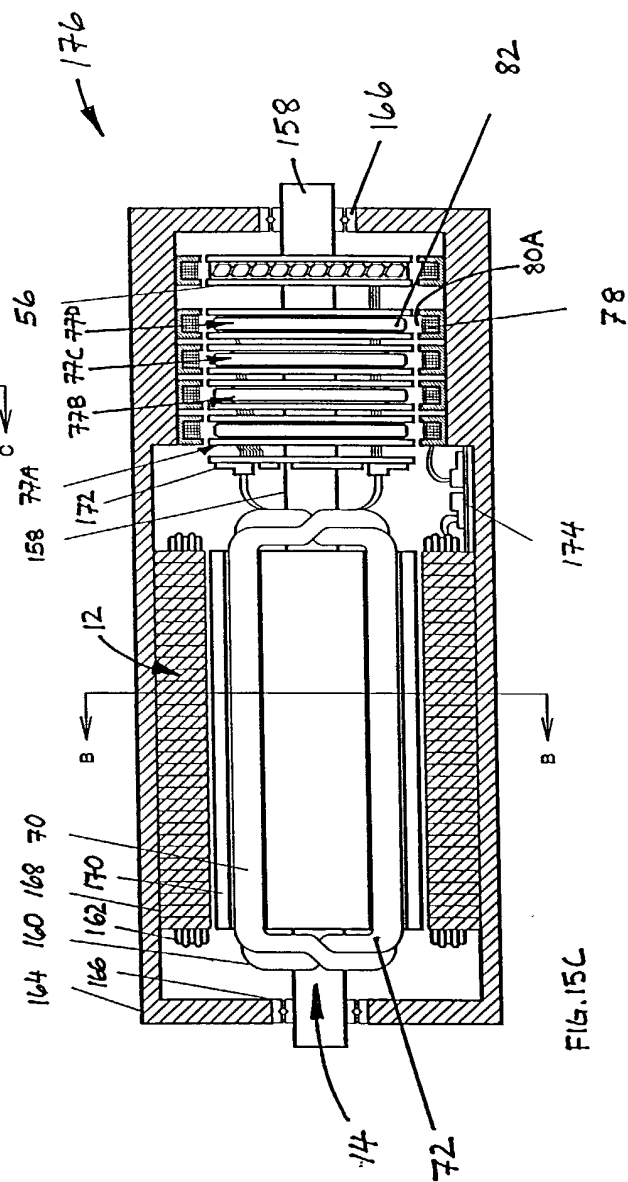
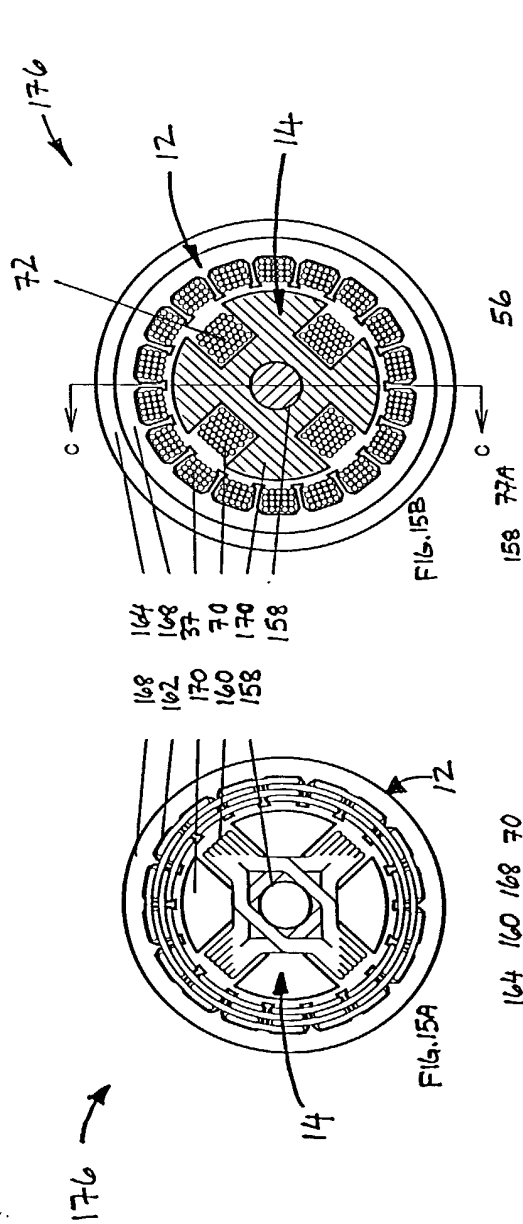
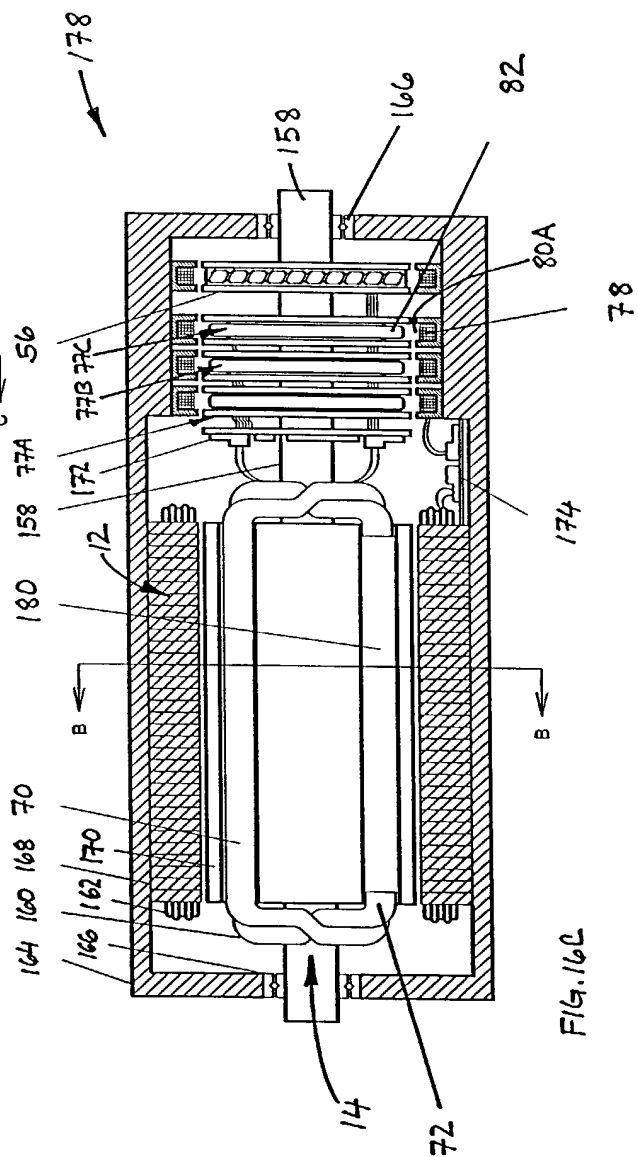
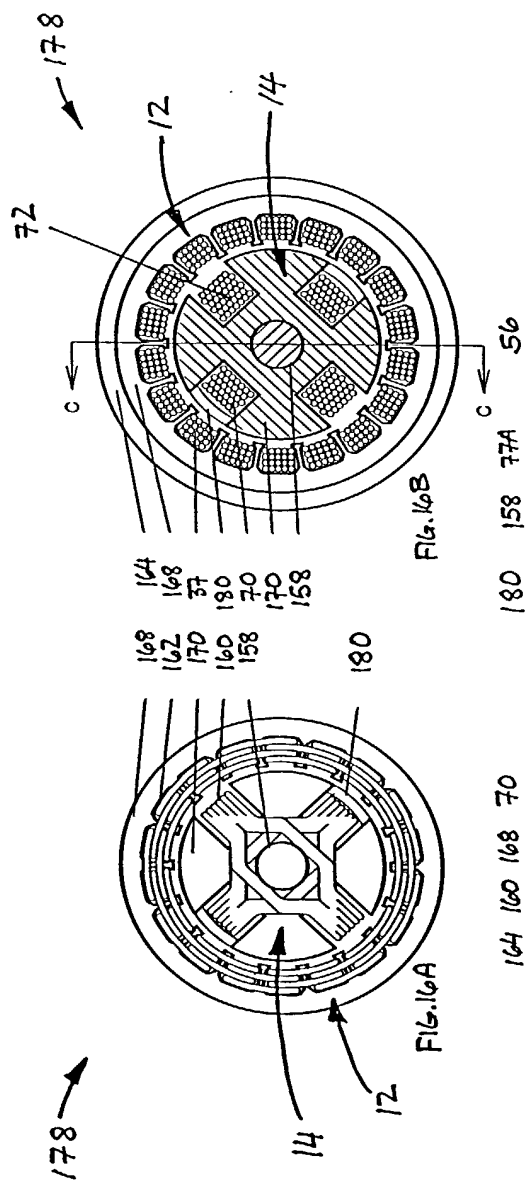


FIG. 13







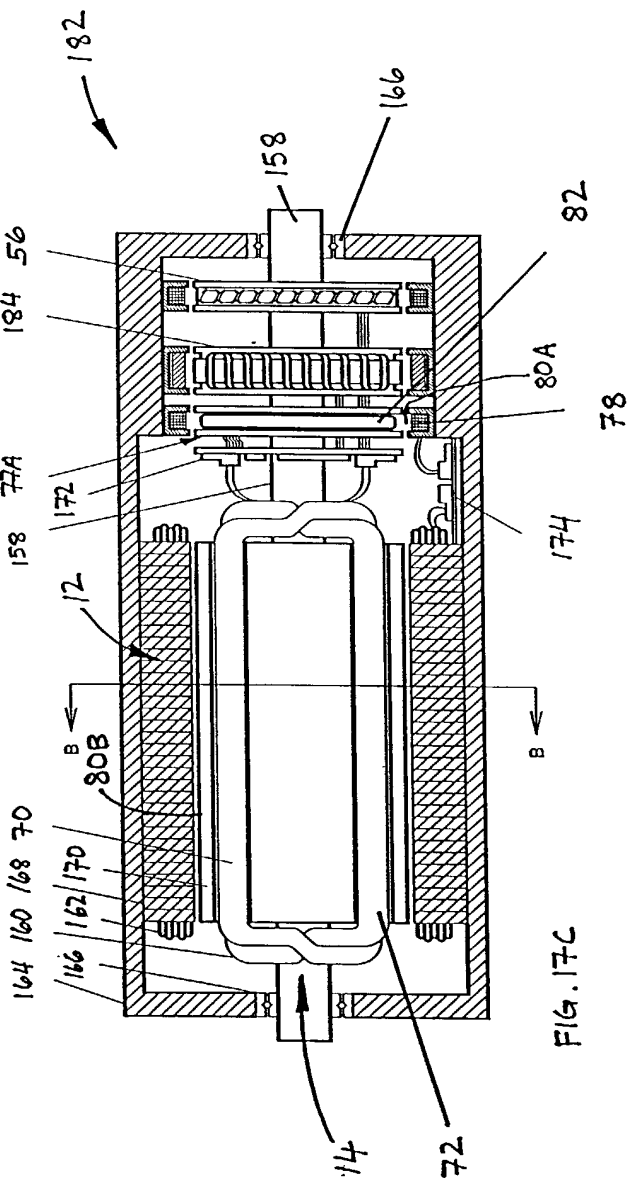
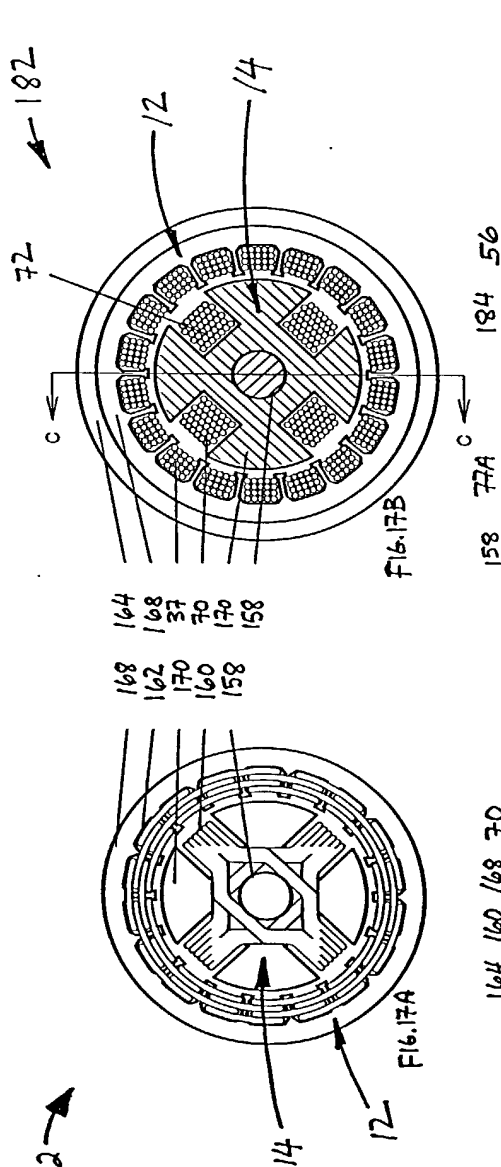


FIG. 17C

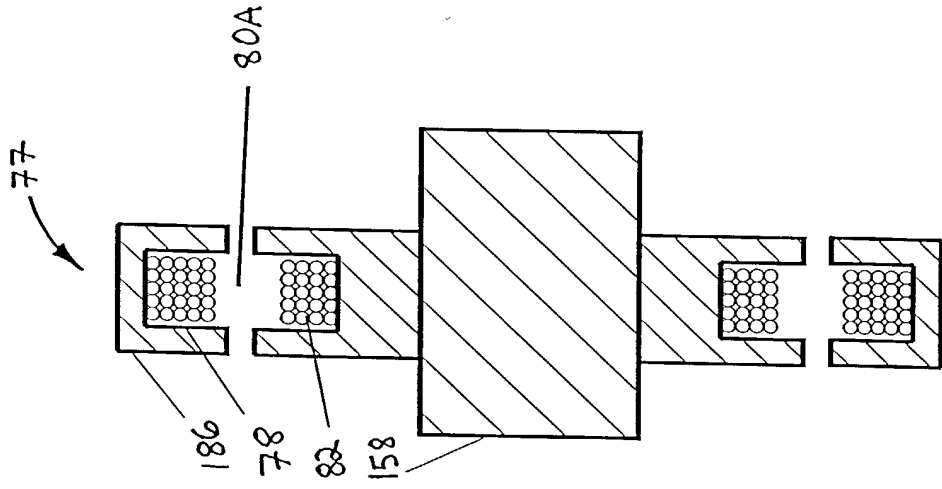


FIG. 18A

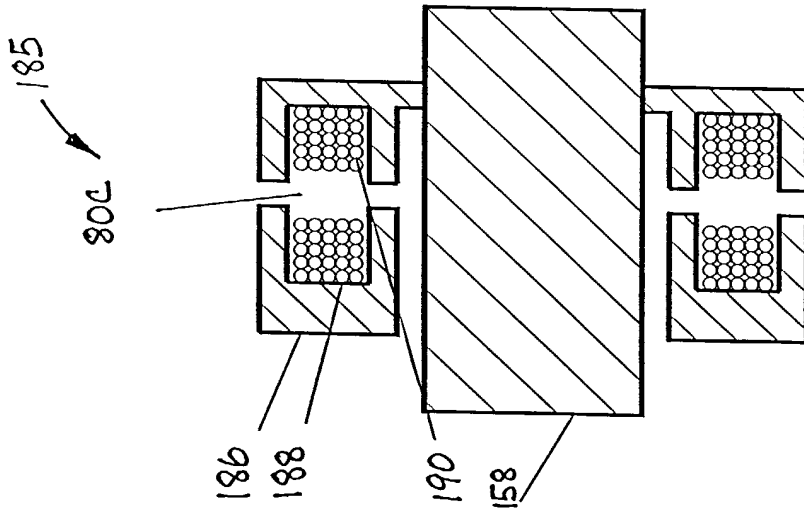


FIG. 18B